

WHAT IS CLAIMED IS:

1. A data processing apparatus capable of data communications with various devices connected with a communication medium, comprising:

5           acquisition means for acquiring function information, connection information and status information of each device through communication with the device;

          management means for storing and managing the  
10       function information, connection information and status information acquired by said acquisition means;

          system displaying means for displaying a system configuration on a display unit by using icons, in accordance with the connection information and status  
15       information stored and managed by said management means;

          designation means for designating a combination of optional icons displayed on the display unit;

          function setting screen displaying means for  
20       displaying a setting screen for setting a combination function in accordance with the combination designated by said designation means and displaying a configuration image including an expansion function of each device designated by said designation means on the  
25       combination function setting screen in accordance with the function information stored and managed by said management means; and

control means for controlling a composite function operation of devices corresponding to the combination function in accordance with an execution designation on the combination function setting screen displayed by  
5 said function setting screen displaying means.

2. An apparatus according to Claim 1, wherein said function setting screen displaying means displays a setting segment for an executable expansion function  
10 of each device on the combination function setting screen, in accordance with the function information of the device designated by said designation means.

3. An apparatus according to Claim 2, further  
15 comprising editing means for editing and setting display contents on the setting segment for the executable expansion function of each device displayed by said function setting screen displaying means,

wherein said function setting screen displaying  
20 means displays the setting segment for the executable function of the device on the combination function setting screen in accordance with an edit result by said editing means.

25 4. An apparatus according to Claim 1, wherein the communication medium is connected with plural other data processing apparatuses communicable with the data

processing apparatus.

5           5. An apparatus according to Claim 4, wherein one  
of the plural data processing apparatuses is used as a  
management server.

          6. An apparatus according to Claim 5, wherein the  
management server can store and manage an expansion  
configuration image resource of each device,  
10           wherein said acquirement means acquires the  
expansion configuration image resource of each device  
transmitted from the management server each time the  
expansion configuration image resource of the device  
including the expansion function of the device and  
15           managed by the management server is updated.

          7. An apparatus according to Claim 1, wherein the  
devices include a printer, a fax machine, a digital  
copying machine, a scanner, a digital camera, and a  
20           modem.

          8. A data processing method for a data processing  
apparatus capable of data communications with various  
devices connected with a communication medium,  
25           comprising:

          an acquirement step of acquiring function  
information, connection information and status

information of each device through communication with the device;

5 a management step of storing and managing the function information, connection information and status information acquired in said acquirement step;

a system displaying step of displaying a system configuration on a display unit by using icons, in accordance with the connection information and status information stored and managed in said management step;

10 a designation step of designating a combination of optional icons displayed on the display unit;

a function setting screen displaying step of displaying a setting screen for setting a combination function in accordance with the combination designated in said designation step and displaying a configuration image including an expansion function of each device designated in said designation step on the combination function setting screen in accordance with the function information stored and managed in said management step:

20 and

a function executing step of executing a composite function operation of devices corresponding to the combination function in accordance with an execution designation on the combination function setting screen displayed in said function setting screen displaying step.

9. A method according to Claim 8, wherein said function setting screen displaying step displays a setting segment for an executable expansion function of each device on the combination function said function setting screen, in accordance with the function information of the device designated in said designation step.

10. A method according to Claim 9, further comprising an editing step for editing and setting display contents on the setting segment for the executable expansion function of each device displayed in said function setting screen displaying step,

wherein said function setting screen displaying step displays the setting segment for the executable function of the device on the combination function setting screen in accordance with an edit result by said editing step.

11. A method according to Claim 8, wherein a management server is provided which can store and manage an expansion configuration image resource of each device,

wherein said acquirement step acquires the expansion configuration image resource of each device transmitted from the management server each time the expansion configuration image resource of the device

including the expansion function of the device and managed by the management server is updated.

12. A method according to Claim 8, wherein the  
5 devices include a printer, a fax machine, a digital copying machine, a scanner, a digital camera, and a modem.

13. A storage medium storing a computer-readable  
10 program for controlling a data processing apparatus capable of data communications with various devices connected with a communication medium, the program comprising:

an acquirement step of acquiring function  
15 information, connection information and status information of each device through communication with the device;

a management step of storing and managing the  
function information, connection information and status  
20 information acquired in said acquirement step;

a system displaying step of displaying a system  
configuration on a display unit by using icons, in  
accordance with the connection information and status  
information stored and managed in said management step;

25 a designation step of designating a combination of optional icons displayed on the display unit;

a function setting screen displaying step of

displaying a setting screen for setting a combination  
function in accordance with the combination designated  
in said designation step and displaying a configuration  
image including an expansion function of each device  
5 designated in said designation step on the combination  
function setting screen in accordance with the function  
information stored and managed in said management step:  
and

a function executing step of executing a composite  
10 function operation of devices corresponding to the  
combination function in accordance with an execution  
designation on the combination function setting screen  
displayed in said function setting screen displaying  
step.

15 14. A storage medium according to Claim 13,  
wherein said function setting screen displaying step  
displays a setting segment for an executable expansion  
function of each device on the combination function  
20 said function setting screen, in accordance with the  
function information of the device designated in said  
designation step.

25 15. A storage medium according to Claim 14,  
wherein the program further comprises an editing step  
for editing and setting display contents on the setting  
segment for the executable expansion function of each

device displayed in said function setting screen  
displaying step,

wherein said function setting screen displaying  
step displays the setting segment for the executable  
5 function of the device on the combination function  
setting screen in accordance with an edit result by  
said editing step.

16. A storage medium according to Claim 13,  
10 wherein a management server is provided which can store  
and manage an expansion configuration image resource of  
each device,

wherein said acquirement step acquires the  
expansion configuration image resource of each device  
15 transmitted from the management server each time the  
expansion configuration image resource of the device  
including the expansion function of the device and  
managed by the management server is updated.

20 17. A storage medium according to Claim 13,  
wherein the devices include a printer, a fax machine, a  
digital copying machine, a scanner, a digital camera,  
and a modem.

25 18. A data processing apparatus capable of data  
communications with plural devices of different types  
installed remotely via a data communication path,



comprising:

acquisition means for acquiring information for visually expressing an appearance of each device via the data communication path; and

5 display control means for displaying first image data having image data for visually expressing the appearance of the device on a display screen of a display unit, in accordance with the information acquired by said acquisition means,

10 wherein the plural devices are independently connectable to an option unit, and

said display control means controls to change a display form of the first image data to be displayed on the display screen, in accordance with whether the  
15 option unit is connected or not or in accordance with a type of the connected option unit, even if the plural devices are of a same type having a same function.

19. An apparatus according to Claim 18, wherein  
20 the plural devices includes an image forming device for forming an image on a sheet, and the option unit includes at least one of a sheet processing unit and a sheet feed unit.

25 20. An apparatus according to Claim 18, wherein the information to be acquired by said acquisition means further includes information on an expansion

function executable by each device, wherein said display control means displays the first image data in a first area of the display screen and displays a first function button corresponding to the expansion function executable by the device in a second area of the display screen, in accordance with the information acquired by said acquirement means.

21. An apparatus according to Claim 20, wherein said display control means arranges and displays plural first function buttons corresponding to plural expansion functions in the second area of the display screen, if there are plural expansion functions executable by the device.

22. An apparatus according to Claim 20, wherein said display control means arranges and displays the first function button and a second function button corresponding to a function executable by the data processing apparatus in the second area of the display screen.

23. An apparatus according to Claim 20, wherein the device includes an image forming device for forming an image on sheet and the first function button includes at least a function bottom for designating one of a staple mode, a two-face printing mode, and a page

layout mode.

24. A data processing apparatus capable of data communications with plural devices of different types  
5 installed remotely via a data communication path,  
comprising:

acquirement means for acquiring information on an expansion function executable by each device via the data communication path; and

10 display control means for displaying a first function button corresponding to the expansion function executable by the device in a first area of a display screen of a display device, in accordance with the information acquired by said acquirement means.

15

25. An apparatus according to Claim 24, wherein said display control means arranges and displays plural first function buttons corresponding to plural expansion functions in the second area of the display  
20 screen, if there are plural expansion functions executable by the device.

26. An apparatus according to Claim 25, further comprising changing means for changing a layout order  
25 of the plural first function buttons in the first area of the display screen.

27. An apparatus according to Claim 24, further comprising, if there are plural candidates for the expansion function capable of being displayed in the first area of the display screen as first function  
5 buttons, selecting means for selecting a candidate to be displayed as the first function button, from the plural candidates.

28. An apparatus according to Claim 24, wherein  
10 said display control means arranges and displays the first function button corresponding to the expansion function executable by the remotely installed device and a second function button corresponding to a function executable by the data processing apparatus,  
15 in the first area of the display screen.

29. An apparatus according to Claim 28, further comprising changing means for changing a layout order of plural function buttons including the first and  
20 second function buttons in the first area of the display screen.

30. A data processing method for a data processing apparatus capable of data communications  
25 with plural devices of different types installed remotely via a data communication path, comprising:  
an acquisition step of acquiring information for

visually expressing an appearance of each device via the data communication path; and

5 a display controlling step of displaying first image data having image data for visually expressing the appearance of the device on a display screen of a display unit, in accordance with the information acquired in said acquirement step,

wherein the plural devices are independently connectable to an option unit, and

10 said display controlling step controls to change a display form of the first image data to be displayed on the display screen, in accordance with whether the option unit is connected or not or in accordance with a type of the connected option unit, even if the plural  
15 devices are of a same type having a same function.

31. A storage medium storing a computer-readable program for executing a program for controlling a data processing apparatus capable of data communications  
20 with plural devices of different types installed remotely via a data communication path, the program comprising:

an acquirement step of acquiring information for visually expressing an appearance of each device via  
25 the data communication path; and

a display controlling step of displaying first image data having image data for visually expressing

the appearance of the device on a display screen of a display unit, in accordance with the information acquired in said acquirement step,

5 wherein the plural devices are independently connectable to an option unit, and

said display controlling step controls to change a display form of the first image data to be displayed on the display screen, in accordance with whether the option unit is connected or not or in accordance with a type of the connected option unit, even if the plural  
10 devices are of a same type having a same function.

32. A data processing method for a data processing apparatus capable of data communications  
15 with plural devices of different types installed remotely via a data communication path, comprising:

an acquirement step of acquiring information on an expansion function executable by each device via the data communication path; and

20 a display controlling step of displaying a first function button corresponding to the expansion function executable by the device in a first area of a display screen of a display device, in accordance with the information acquired in said acquirement step.

25

33. A method according to Claim 32, wherein said display controlling step arranges and displays the

first function button corresponding to the expansion  
function executable by the remotely installed device  
and a second function button corresponding to a  
function executable by the data processing apparatus,  
5 in the first area of the display screen.

34. A storage medium storing a computer-readable  
program for executing a program for controlling a data  
processing apparatus capable of data communications  
10 with plural devices of different types installed  
remotely via a data communication path, the program  
comprising:

an acquirement step of acquiring information on an  
expansion function executable by each device via the  
15 data communication path; and

a display controlling step of displaying a first  
function button corresponding to the expansion function  
executable by the device in a first area of a display  
screen of a display device, in accordance with the  
20 information acquired in said acquirement step.

35. A storage medium according to Claim 34,  
wherein said display controlling step arranges and  
displays the first function button corresponding to the  
expansion function executable by the remotely installed  
25 device and a second function button corresponding to a  
function executable by the data processing apparatus,

in the first area of the display screen.

36. A data processing apparatus capable of data communications with various devices connected with a communication medium, comprising:

first setting means for setting a specific image processing condition for a desired device;

second setting means for setting a specific image processing condition executable by the data processing apparatus;

image processing means for processing image data input from each device to execute a specific image editing processing, in accordance with the specific image processing condition set by one of said first and second setting means; and

control means for outputting the image data processed by said image processing means from one of the devices.

37. An apparatus according to Claim 36, wherein said image processing means executes the specific image editing processing for image data input from each device, in accordance with the specific image processing condition set by said second setting means, the specific image editing processing including an image effect editing processing and stamp addition editing processing.



38. An apparatus according to Claim 36, wherein the devices include a printer, a fax machine, a digital copying machine, a scanner, a digital camera, and a modem.

5

39. An apparatus according to Claim 36, wherein said control means outputs the processed image data or image data input from each device from another device.

10

40. A data processing method for a data processing apparatus capable of data communications with various devices connected with a communication medium, comprising:

15 a first setting step of setting a specific image processing condition for a desired device;

a second setting step of setting a specific image processing condition executable by the data processing apparatus;

20 an image processing step of processing image data input from each device to execute a specific image editing processing, in accordance with the specific image processing condition set in one of said first and second setting steps; and

25 a controlling step of outputting the image data processed by said image processing means from one of the devices.

41. A method according to Claim 40, wherein said image processing step executes the specific image editing processing for image data input from each device, in accordance with the specific image processing condition set in said second setting step, the specific image editing processing including image effect editing processing and stamp addition editing processing.

42. A method according to Claim 40, wherein the devices include a printer, a fax machine, a digital copying machine, a scanner, a digital camera, and a modem.

43. A method according to Claim 40, wherein said control step outputs the processed image data or image data input from each device from another device.

44. A storage medium storing a computer-readable program for controlling a data processing apparatus capable of data communications with various devices connected with a communication medium, the program comprising:

a first setting step of setting a specific image processing condition for a desired device;

a second setting step of setting a specific image processing condition executable by the data processing

apparatus;

an image processing step of processing image data input from each device to execute a specific image editing processing, in accordance with the specific image processing condition set in one of said first and second setting steps; and

a controlling step of outputting the image data processed by said image processing means from one of the devices.

10

45. A storage medium according to Claim 44, wherein said image processing step executes the specific image editing processing for image data input from each device, in accordance with the specific image processing condition set in said second setting step, the specific image editing processing including image effect editing processing and stamp addition editing processing.

15

46. A storage medium according to Claim 44, wherein the devices include a printer, a fax machine, a digital copying machine, a scanner, a digital camera, and a modem.

20

47. A storage medium according to Claim 44, wherein said control step outputs the processed image data or image data input from each device from another device.

25